

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a process for the continuous recirculation of the propene which has not reacted in the oxidation of propene with hydroperoxide to produce propene oxide. In a process for the preparation of propene oxide via hydroperoxide oxidation of propene, the molar amount of propene is in excess of the molar equivalent of hydroperoxide in order to reduce the formation of unwanted products. Therefore, efficient recovery of unreacted propene is necessary for good economical performance of the production of the propene oxide.

The claimed invention addresses this problem by providing a process as described in Claim 8 for the continuous recovery and recirculation to the oxidation process of the propene which has not reacted in the oxidation by means of hydroperoxide. No such process is disclosed or suggested in the cited references.

The rejection of Claims 8-18 under 35 U.S.C. 103(a) over Vora et al. (U.S. 5,599,955) in view of Aldrich (page 1560, 1998) is respectfully traversed.

Vora combined with Aldrich does not disclose or suggest a process comprising:

(i) separating the propene and propane from the offgas stream **by absorption in a hydrocarbon,**

(ii) **desorbing the propene and propane from the hydrocarbon,** wherein the mixture of propene and propane is separated off either in liquid form in a distillation column at a pressure of from 1 to 3 bar or in gaseous form at a pressure of from 1 to 3 bar and a temperature of from 50 to 100°C in a flash evaporation,

(iii) recirculating the propene obtained in step (ii) to the oxidation process.

Vora is directed to a process for the production of propylene oxide from a feedstream comprising hydrogen and a carbon oxide. In an oxidation zone, propylene is contacted with

hydrogen peroxide in the presence of a silicate catalyst. The unreacted propylene stream from the oxidation zone is mixed with another propylene stream and passed through a zeolite absorbent to remove water, then recycled to the oxidation zone. Applicants respectfully point out that water is absorbed in the zeolite absorbent and **nowhere does Vora disclose or suggest that the propylene is absorbed in a hydrocarbon, then desorbed to recycle to the oxidation zone.**

The Office admits that Vora does not disclose or suggest a hydrocarbon, specifically the hydrocarbon, tetradecane. Therefore Aldrich is cited to show tetradecane.

Applicants respectfully call the Examiner's attention to the following excerpt from the Office's own discussion of "**Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.***."

"The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention."⁴³ "[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does."⁴⁴ **If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art,**" (Federal Register, Vol. 72, No. 195, page 57529) **(Bold added)**

Applicants respectfully submit that nowhere does Aldrich disclose or suggest that tetradecane would or could function as an efficient absorbent for propene. Moreover, the zeolite absorbent taught in Vora is for the purpose of absorbing water. Propylene is simply passed through the absorbent and recycled to the oxidation zone.

Therefore, Applicants respectfully submit that the combined references fail to disclose or suggest a process comprising:

(i) separating the propene and propane from the offgas stream **by absorption in a hydrocarbon,**

(ii) **desorbing the propene and propane from the hydrocarbon,** wherein the mixture of propene and propane is separated off either in liquid form in a distillation column at a pressure of from 1 to 3 bar or in gaseous form at a pressure of from 1 to 3 bar and a temperature of from 50 to 100°C in a flash evaporation, as described in the claimed invention. Therefore according to the guidelines of *KSR International Co. v. Teleflex Inc.*” above, a conclusion of obviousness over Vora and Aldrich cannot be supported.

In view of the above, Applicants respectfully submit that the combined references do not render the claimed invention obvious and withdrawal of the rejection of Claims 8-18 under 35 U.S.C. 103(a) over Vora et al. in view of Aldrich is respectfully requested.

The rejection of Claims 8-9 and 12-18 under 35 U.S.C. 112, second paragraph for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention is respectfully traversed.

Applicants have clearly described the meaning of the term “hydrocarbon” within the scope of the claimed invention on page 3, beginning at line 24 of the specification as:

“The term hydrocarbons encompasses aliphatic, cyclic, alicyclic, saturated, unsaturated and aromatic hydrocarbons which may also be substituted by aliphatic radicals. The hydrocarbons can also be used in the form of mixtures in the process of the present invention. The hydrocarbons preferably have more than 10 carbon atoms in the molecule.

Preference is given to using tetradecane as hydrocarbon.”


The MPEP § 2111.01(IV.) states: “An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning.”

Applicants respectfully submit that the meaning of "hydrocarbon" is clearly defined in the specification such that one of ordinary skill in the art is enabled to recognize and understand the term as used in the claimed invention. Therefore, withdrawal of the rejection of Claims 8-9 and 12-18 under 35 U.S.C. 112, second paragraph, is respectfully requested.

Applicants respectfully submit that the above-identified application is now in condition for allowance and early notice of such action is earnestly requested.

Respectfully submitted,

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